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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,945	09/29/2003	Manfred Rauer	BOE01 023	8309

7590 11/15/2004

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EXAMINER


WASHBURN, DOUGLAS N

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/671,945	Applicant(s) RAUER ET AL.	
	Examiner Douglas N Washburn	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 7 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5 March 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

- 1 Claims 13 and 14 are objected to because of the following informalities:
Claim 13 is objected to because "... an **additional reference position sensor** is provided ..." lacks antecedence;

Claim 14 is objected to because "... the **reference position sensor** ... and the **reference position sensor** increments ..." lacks antecedence.
Correction is required.

Claim Rejections - 35 USC § 102

- 2 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 6, 8, 9 and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by McCann (US 5,637,974) (Hereafter referred to as McCann).

McCann teaches:

A sensor device is mounted in a specific position relative to a rotor in regard to claim 1

(e.g.; column 6, lines 28-29);

Increments generated by a sensor device during a revolution of a rotor are recorded in regard to claim 1

(e.g.; column 8, lines 8-10; figure 6, element 64);

An angular position of a rotor during a revolution of the rotor are recorded in regard to claim 1

(e.g.; column 8, lines 8-10; figure 6, element 64);

Recorded angular position and sensor device increments are correlated and the correlation of the recorded angular position with the sensor device increments are subsequently saved in regard to claim 1

(e.g.; column 8, lines 8-10; figure 6, element 64);

Each sensor device increment is allocated to a specific angular position of a rotor in regard to claim 2

(e.g.; column 12, lines 30-31);

An angular position of a rotor is recorded with a position sensor for sensor device adjustment, the resolution of this position sensor being equivalent to or higher than the resolution of the sensor device in regard to claim 6

(e.g.; column 13, lines 21-26; figure 6, element 62);

A motor is powered, and voltage induced by the motor is recorded, an angular position of a rotor and a sought commutation angle being derived from the induced voltage in regard to claim 8

(e.g.; column 13, lines 8-29; figure 6);

A signal is generated when recording a sought commutation angle which characterizes a recorded angular position as a commutation position in regard to claim 9

(e.g.; column 13, lines 21-29; figure 6);

Electronically-commutated motor including a rotor, a stator and a sensor device utilized for recording the rotational position of the rotor, the sensor device being mounted in a specific position relative to the rotor, with a storage unit for saving a correlation of the rotor angular position and the sensor device increments, and a control unit for motor control according to the sensor device output signals and the saved correlation in regard to claim 11

(e.g.; column 6, lines 16-20; figure 4, element 50);

A phase measuring unit for measuring the voltage induced by the rotor while the motor rotor is rotating in regard to claim 12

(e.g.; column 6, lines 38-41; figure 5, element 56);

A commutation computer for calculating the commutation instances based on the induced voltages in regard to claim 12

(e.g.; column 6, lines 44-48; figure 5, element 40);

A signal pulse generating unit which receives an input signal from the commutation computing limit and generates a signal pulse for every commutation instance, transmitting these to the motor in regard to claim 12

(e.g.; column 6, lines 44-48; figure 5, element 68);

A storage unit for saving the correlation between commutation instances and sensor device increments in regard to claim 12

(e.g.; column 12, lines 26-31; figure 5, element 40);

An additional reference position sensor is provided on the motor for adjusting in regard to claim 13

(e.g.; column 12, lines 26-31; figure 5, element 68);

And a reference position sensor has a higher resolution than that of a sensor device, and the reference position sensor increments and the sensor device increments are correlated in regard to claim 14
(e.g.; column 12, lines 44-58).

Claims 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Bechtler et al. (DE 101 18 072 A1) (Hereafter referred to as Bechtler).

Bechtler teaches:

A sensor device is mounted in a specific position relative to a rotor in regard to claim 1

(e.g.; ¶ 0016);

Increments generated by a sensor device during a revolution of a rotor are recorded in regard to claim 1

(e.g.; ¶ 0018);

An angular position of a rotor during a revolution of the rotor are recorded in regard to claim 1

(e.g.; ¶ 0018);

Recorded angular position and sensor device increments are correlated and the correlation of the recorded angular position with the sensor device increments are subsequently saved in regard to claim 1

(e.g.; ¶ 0016-0018);

Each sensor device increment is allocated to a specific angular position of a rotor in regard to claim 2

(e.g.; ¶ 0016);

A sensor device generates a zero index and the number of sensor device increments lying between the generation of the zero index and a motor commutation angle are counted in regard to claim 3
(e.g.; ¶ 0016);

The number of sensor device increments lying between a generation of a zero index and each motor commutation angle are counted in regard to claim 4
(e.g.; ¶ 0016);

And the number of sensor device increments from a zero index to a motor commutation angle are saved in regard to claim 5
(e.g.; ¶ 0018).

Allowable Subject Matter

3 Claims 7 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas N Washburn whose telephone number is (571) 272-2284. The examiner can normally be reached on Monday through Thursday 6:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2863

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DNW

BRYAN BUI
PRIMARY EXAMINER


11/9/04